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cont  
a catheter associated with said sensor means and said stimulus means, said catheter having [a] at least one lumen therethrough; and

an electrical conductor means for operatively connecting said stimulus means and said sensor means [through which said sensor means and said stimulus means are adapted to be operatively connected] to control circuitry for said exercise responsive cardiac pacemaker in such manner that the frequency of said electrical stimulus is controlled by said blood temperature as sensed by said sensor means, said electrical conductor means including a bifilar coil wire connected to said stimulus means, a pair of bifilar coil wires associated with said electrical leads of said sensor means, and a pair of rigid conductive tubing sections joining said pair of bifilar coil wires to said pair of leads, respectively,

wherein said sensor means is encased within epoxy and received in a lumen of said catheter which is at least partially filled with an elastomer.

Please add the following claims:

Q2  
1. A cardiac pacemaker including means for variably controlling the stimulation rate of the heart according to the level of muscular exertion in the body, comprising:

P<sub>1</sub> a sensor means for sensing a body temperature;

P<sub>2</sub> a stimulus means for applying an electrical stimulus to a heart;

P<sub>3</sub> a control circuit means for calculating dT/dt of said sensed body temperature, said control circuit means including means for generating a rate control signal

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according to a predetermined algorithm relating heart rate to  $dT/dt$ ; and

<sup>P</sup><sub>1</sub> a cardiac pacemaker connected to said control circuit means and said stimulus means and responsive to said rate control signal to variably control the stimulation rate of the heart.

<sup>2</sup><sub>16</sub>. The cardiac pacemaker of claim <sup>1</sup><sub>15</sub> wherein said rate control signal generating means is operative to generate a rate control signal according to a predetermined algorithm relating heart rate to  $dT/dt$  and a previous heart rate.

<sup>3</sup><sub>17</sub>. The cardiac pacemaker of claim <sup>2</sup><sub>16</sub> wherein said control circuit means is operative to calculate  $dT/dt$  on the basis of first and second average temperature values associated respectively with first and second consecutive time periods of approximately one-minute duration.

<sup>4</sup><sub>18</sub>. The cardiac pacemaker of claim <sup>3</sup><sub>17</sub> wherein said control circuit means further includes means for sampling the output of said sensor means periodically at a rate of approximately one sample every two seconds, and means for averaging temperature samples from said sensor means over a period of approximately one minute.

REMARKS

Claims 1 through 9 have been rejected by the Examiner under 35 U.S.C. §101 on the basis of double patenting with respect to applicants' U.S. Patent No. 4,436,092. Claims

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